Maui Development Limited
PO Box 23039
Wellington 6140

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Telephone: (04) 460 2535
commercial.operator@mauipipeline.co.nz

Mr. Brett Woods
Senior Analyst
Regulation Branch
Commerce Commission
PO Box 2351
Wellington 6140

Dear Mr. Woods,

Please regard this letter as our submission on the "Invitation to have your say on whether the Commerce Commission should review or amend the cost of capital input methodologies" dated 20 February 2014. In this letter we will use the terms "MDL", "we", "us" or "our" to refer to the Gas Transmission Business (GTB) of Maui Development Limited. Our responses to the questions posed by the Commission are set out below.

1. Are the positive incentives provided by using the 75th percentile now weakened?

Yes. Investments in infrastructure tend to have long payback periods. Any business case for making such an investment tends to be very sensitive to the assumed long-term return. The prospect of a significant reduction in that return can significantly weaken the business case for new investment.

Any potential investment that would become uneconomical with a reduced WACC is unlikely to proceed. Regulated firms are unlikely to take a hope-for-the-best approach. Under the current state of uncertainty we agree that the intended incentive from the 75th percentile uplift is probably not being realised.

2. Should we do a review of the cost of capital IMs early?

Yes, probably. In light of our answer above, we expect that investment prospects – or at least their evaluations – could be improved by eliminating the current state of uncertainty.

We support the Commission's suggestion that such a review need not be limited to just the matters that the Court has raised. If improved approaches and data are available these can be considered for adoption in the revised IM.

In response to the Commission's specifically listed areas of interest we can offer the following.

- In order to minimise the period of uncertainty that now exists, the review could start at the earliest possible opportunity.
- We do not know what a realistic timeframe for such a review would be, but expect it will be more than a few months. It is unlikely to be completed by the end of November in this year.
- While the timing may be inconvenient, we agree that any IM review needs to be comprehensive and robust. We do not believe time constraints allow for lower standards. We do not support any half-baked IM that is finalised prematurely for the sake of meeting a target date.
- We expect the IM review could be completed in time for the reset of DPP determinations for Gas Pipeline Businesses. This would at least provide some certainty for those determinations.

- We do not know how to evaluate the impact on regulatory certainty, incentives for efficient investment, and confidence in the Part 4 regime. We expect these may all be reduced. Under the current circumstances, however, regulatory certainty and incentives for investment are already weakened. We do not know whether an early IM review will lead to further weakening, or mitigate against the current weakness.
- The impact on confidence in the Part 4 regime is likely to be strongly influenced by the approach the Commission will take. Confidence will certainly be damaged by a hasty review with outcomes that could subsequently be overruled by a Court if its merits are appealed again.
- We do not believe it is appropriate to review the cost of capital IMs in complete isolation from the other IMs. However, we expect there are only a limited number of interdependencies. Where necessary, we assume such interdependencies can be addressed without much additional effort or further delay.

3. Should we consider an amendment solely to the 75th percentile?

No, emphatically. The percentile adjustment should not be treated as an isolated issue.

The Court's judgment included the following statements.

- [1189] "In determining WACC, precision is therefore an elusive and perhaps non-existent quality. Setting WACC is, we suggest, more of an art than a science. ..."
- [1683] "In deciding to use the SB-L CAPM, the Commission acknowledged that the results of a number of empirical tests imply that the CAPM may understate the returns on low-beta stocks, such as firms with low market risk like the suppliers regulated under Part 4. This would constitute model error or bias. ..."
- [1684] "The possibility of this type of error – a bias in estimating the returns on low-beta stocks – was a consideration in the Commission's decision to adopt the 75th percentile estimate of the WACC for price-quality regulation. ..."

The cost of capital IM and WACC determinations are based on a large number of assumptions. These include theoretical assumptions for which there is no empirical support, model assumptions that are demonstrably wrong, and parameter estimates based on fluctuating values from a limited sub-set of entities that are assumed to be comparable or relevant for all firms within a sector for the full duration of a regulatory period. Every single one of these assumptions can be challenged (and many were).

A key justification for the Commission's approach was that it led to reasonable outcomes; despite the acknowledged anomalies and shortcomings in the input assumptions. The Court's judgment (in the Outcome under part 6.5) included the following key statements.

- "We therefore agree with Commission's conclusion that those independent estimates support the robustness and reasonableness of its WACC estimate. They do not, to use the Commission's words, identify any oddity or other like outcome in the Commission's estimates, such as might have required the Commission to change its approach."
- "Moreover those independent estimates strongly suggest that the WACC estimates that would result from allowing in full the appellants' appeals against the Commission's cost of capital IMs would be considerably in excess of those that would be appropriate given the Part 4 purposes. This conclusion provides an important context for our consideration of the individual appeals against the Commission's determination in the cost of capital IMs of WACC parameter values."

Indeed, the Court dismissed several appeals on specific input parameters with only minimal justification beyond relying on the principles expressed in its statements above.

As a result, we submit it would be wrong to tinker with one input parameter in isolation. It would be inconsistent to accept the Court's decline of appeals on the basis that resulting adjustments would increase WACC beyond outcomes considered reasonable, and then pursue another isolated adjustment that would drop WACC significantly below those same reasonable outcomes.

If confidence in the Part 4 regime is to be maintained, despite the current circumstances, then any review of the cost of capital IM needs to be robust and comprehensive. As we indicated above, we accept this may involve new approaches and insights. The ultimate result is bound to include trade-offs and compromises between conflicting objectives. There is an inevitable tension between the section 52A(1)(d) objective of limiting the ability of regulated suppliers to extract excessive profits, and the section 52A(1)(a) objective of providing regulated suppliers with incentives to invest and innovate. We submit the IM review process needs to be approached and performed holistically, and cannot be limited to a single isolated element.

4. Are there any other options for addressing the Court's concerns?

We have not considered other options. We assume the Court's concerns can be addressed, if desired, in time for the next determination of price-quality paths for Gas Pipeline Businesses.

5. What evidence is there in support of either the 75th percentile or credible alternatives?

We do not possess any clear evidence on this topic. A quick Internet search, however, finds that these questions are being addressed in various jurisdictions. As part of its review we assume the Commission can consider the discussions taking place in other jurisdictions too.

We do offer the following points for consideration.

- Clear empirical evidence will be difficult to find. The Commission is faced with this conundrum throughout its efforts in determining a WACC. After all, the CAPM methodology is based on assumptions that are empirically incorrect to begin with.
- A large number of plausible arguments for an adjustment above the mid-point estimate have been offered by various academics. These include arguments that are based on the shortcomings and biases of the CAPM methodology itself.
- We also note that the Commission is setting WACC for firms on a sector-wide basis. (Even in the case of a CPP or IPP.) This increases the scope for error and increases the likelihood that the WACC determined by the Commission will be inadequate for at least some firms in a sector.
- Applying a sector WACC could actually be regarded as an extreme form of the WACC fallacy in practice. See research paper on "The WACC Fallacy: The Real Effects of Using a Unique Discount Rate" by Phillip Krüger, Augustin Landier and David Thesmar, September 2011.
- The Commission's approach with a sector WACC also does not allow any adjustment for characteristics of firms within a sector. The Commission's estimates are based on public company equity betas, rated bond issues, and CAPM assumptions involving asset liquidity. In reality, many regulated firms are not publicly traded, do not have rated debt, and do not offer any liquidity to their owners at all. If anything, the Commission's estimates severely underestimate the real WACC for such firms.
- The idea of a "loss function" has been proposed as a tool for estimating adjustments. While we understand the conceptual attraction of this idea, we doubt it is adequate to resolve all the issues involved. Moreover, we strongly doubt that sufficiently strong and comprehensive analysis for a robust implementation of this idea is possible.

The Commission also asks about the significance of observations that might suggest the use of the 75th percentile WACC is higher than needed. We do not believe the observations on two New Zealand transactions from a single New Zealand analyst mentioned in the paper are particularly significant.

More importantly, the Commission needs to distinguish the reasons and purpose for making a WACC estimate. Analysts in the business of evaluating financial transactions are bound to make their estimates as neutral as possible (assuming they are neutral themselves). Asymmetric consequences are irrelevant for such an evaluation and percentile adjustments should be avoided. As a result, WACC estimates by financial analysts should always be below the 75th percentile WACC estimates by the Commission. Instead, those WACC estimates should be comparable to the mid-point estimates by the Commission. The significant message from Northington Partners' 2013 valuation of Transpower is that their WACC estimate was actually higher than the Commission's mid-point estimate.

We encourage the Commission to use WACC estimates from financial analysts for comparison to mid-point estimates by the Commission. The Commission's WACC determinations, however, are made for regulatory purposes and price setting. Asymmetric consequences are definitely relevant in such a case. Therefore, percentile adjustments above the mid-point estimate, in order to address such asymmetries, are entirely appropriate for WACC determinations in a regulatory context.

6. How significant is it that regulated outputs are inputs to other sectors of the economy?

We expect this would only be significant if a "loss function" were to be derived. In that case we expect that costs and benefits for infrastructure investments by regulated entities would need to be derived across all sectors of the economy. As we stated before, we also expect this will be a practically impossible task.

For investment evaluations by individual firms, the impact on other sectors of the economy is usually irrelevant. (This assumption may be invalid if firms are government owned.) The fact that their outputs are inputs to other sectors is only relevant to the extent that the Commission is willing to consider the asymmetric consequences of foregoing investments.

Conclusion

We have appreciated the opportunity to provide this submission. For any additional questions or clarifications please do not hesitate to contact us.

Yours sincerely,

Jelle Sjoerdsma
Commercial Operator, Maui Pipeline
for Maui Development Limited